



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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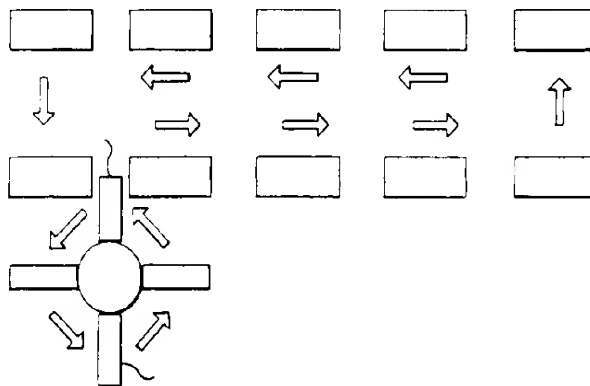
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18 February 1999 (18.02.99)

(54) Title: MOLDING PROCESSES

**(57) Abstract**

Efficient and consistent processes for manufacturing moldings, especially ophthalmic lenses such as contact lenses. The processes comprise a series of improvements, including improvements in the areas of conditions for dispensing liquid prepolymer into lens molds, male and female mold mating, reusable molds, mold cleaning, lens separation from molds (demolding), lens handling, and in-line inspection. Cyclic series of processing steps are also disclosed. Additionally, an improved molding tool is disclosed, with the molding tool including a male mold housing and a female mold housing, each of which has disposed therein a plurality of mold halves.

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# INTERNATIONAL SEARCH REPORT

Intern: Application No  
PCT/EP 98/01698

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 6 B29D11/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 6 B29D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
Y	EP 0 645 235 A (JOHNSON & JOHNSON VISION PROD) 29 March 1995	1,2, 7-10,35, 74,75, 77,78
A	see column 4 - column 5	11
Y	EP 0 671 249 A (CIBA GEIGY AG) 13 September 1995	1,2, 7-10,35, 74,75, 77,78
	see page 1, line 9 - line 18 see page 1, line 26 - line 30 see page 1, line 43 - line 48 see page 6, line 27 - line 28	
	-/--	

☒ Further documents are listed in the continuation of box C

☒ Patent family members are listed in annex

### \* Special categories of cited documents

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
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- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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- \*&\* document member of the same patent family

Date of the actual completion of the international search

4 August 1998

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# INTERNATIONAL SEARCH REPORT

Internat. Application No.  
PCT/EP 98/01698.

C (Continuation): DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 637 490 A (CIBA GEIGY AG) 8 February 1995 cited in the application ---	1,11,35, 74
A	US 5 508 317 A (MUELLER BEAT) 16 April 1996 cited in the application ---	1,11,35, 74
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A	WO 92 09421 A (BAUSCH & LOMB) 11 June 1992 -----	1,11,35, 74

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/EP 98/01698

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos. ...  
because they relate to subject matter not required to be searched by this Authority, namely
  
2. ☒ Claims Nos.: 67-73  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically  
There are no technical features in the claims so a meaningful search was not possible (Art. 17.2(b) PCT).
  
3. ☐ Claims Nos. ...  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
  
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
  
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
  
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims, it is covered by claims Nos.

1-20, 35-39, 74-79

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest

☐ No protest accompanied the payment of additional search fees

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-20,35-39,74-79

Recycling of moulds made from polymeric materials, used for the manufacture of lenses, incl. contact lenses.

2. Claims: 21-34

Mould with a hinge and method of using the same to produce ophthalmic lenses.

3. Claims: 40-

Process for production of ophthalmic lenses by dispensing prepolymer in a humid environment.

4. Claim : 50

Process for cleaning a moulded product whilst in the mould.

5. Claim : 55

Process of centuring an ophthalmic moulding on a female mould half.

6. Claim : 60

Method for locating a moulded ophthalmic lens on a mould.

7. Claim : 65

Process for inspecting peripheral areas of a contact lens.

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Information on patent family members

Internal Application No

PCT/EP 98/01698

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